

Advisory Opinion

on the

***Socio-economic Impact and
State Guide Plan Consistency***

of the proposed

REVOLUTION WIND PROJECT

Prepared for the

ENERGY FACILITY SITING BOARD

Docket No. SB-2021-01

By the

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TABLE OF CONTENTS

PART ONE: INTRODUCTION

A. Statewide Planning Review Process	1
B. Organization of the Advisory Opinion.....	3

PART TWO: STATE GUIDE PLAN CONSISTENCY

Background.....	4
A. Energy 2035: Rhode Island State Energy Plan	5
B. Land Use 2025: Rhode Island’s State Land Use Policies & Plan.....	10
C. Rhode Island Rising: A Plan for People Places and Prosperity	12
D. State Housing Plan	13
E. State Historical Preservation Plan.....	14
F. Ocean State Outdoors: Rhode Island’s Comprehensive Outdoor Recreation Plan	14
G. A Greener Path... Greenspace & Greenways For Rhode Island’s Future	15
H. Forest Resources Management Plan	16
I. Urban and Community Forestry Plan	17
J. Moving Forward RI 2040: Long-Range Transportation Plan.....	18
K. Waterborne Transportation Plan	18
L. Rhode Island Water 2030.....	19
M. Water Quality 2035	20
N. Consistency with the Resilient Rhode Island Act and other relevant statutes	21

PART THREE: SOCIO-ECONOMIC IMPACT ASSESSMENT

Background.....	25
A. Economic Impact Assessment	26
1. Local and Statewide Business Impacts: Jobs, Earnings, and Economic Output	27
B. Revenues	30
1. State Revenues	30
2. Municipal Revenues	32
C. Energy Reliability	33
D. Social Impact Assessment.....	33
1. Population Change.....	33
2. Social Equity.....	34
3. Housing.....	35
4. Visual Impacts	35

PART FOUR: ADVISORY OPINION AND RECOMMENDATIONS

A. State Guide Plan Consistency	37
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A. Socio-economic Impact.....	37
C. Recommendations	38

PART ONE: INTRODUCTION

STATEWIDE PLANNING REVIEW PROCESS

In its Preliminary Decision and Order for the Revolution Wind Project (“Project” or “Facilities”) dated April 26, 2021, the Energy Facility Siting Board (“EFSB” or “Board”) provided the following directive:

The Statewide Planning Program within the Division of Planning is directed to render an advisory opinion as to (i) the socio-economic impact of the proposed Facilities, including its construction and operation; (ii) the proposed Facilities' consistency and compliance with the State Guide Plan including the State Energy Plan-Energy 2035; and (iii) in coordination with the Rhode Island Office of Energy Resources, a particular examination of the proposed Facilities' consistency and compliance with the State Energy Plan and whether the Facility will conform to the requirements and provisions of the Resilient Rhode Island Act, R.I. Gen. Laws §§ 42-6.2-1 et seq., or any other applicable and/or relevant statute enacted during this session of the General Assembly that would relate to the project, and state energy policies. In addressing the issue of socio-economic impact, consideration must be given to economic and reliability benefits, including employment and tax benefits to the Town of North Kingstown and/or to the State.

1. Role of Statewide Planning Staff and State Planning Council

Per RI Gen. Law 42-11-10(b)(2), “The statewide planning program shall consist of a state planning council, and the division of planning.” In the creation of this Advisory Opinion, the Division of Statewide Planning (“DSP”) staff had the primary responsibility for producing a draft of this report and advisory opinion for consideration by the State Planning Council. DSP staff reviewed the full set of application materials, formulated requests for additional information, and reviewed the data request responses provided by the Applicant. Additionally, staff monitored pre-filed testimony and Applicant responses to other agencies’ data requests as such information was made available through the EFSB’s Service Contact list for this Project. The draft Advisory Opinion was presented to the State Planning Council for final revisions and approval.

2. Coordination with other Agencies

Role of other EFSB Designated Agencies

The Energy Facility Siting Act states that, “The jurisdiction of each state agency should be defined, and the role of each agency in energy siting should be delineated, *to eliminate overlap and duplication* and to insure that expeditious decisions are made within a time frame to be determined by law.¹” Therefore, in determining which socio-economic topics to address for this

¹ RIGL 42-98-1(c)

advisory opinion, the DSP recognized that the EFSB has already requested that many factors be evaluated by the state’s leading experts within their respective fields. These included:

- Rhode Island Historic Preservation and Heritage Commission;
- Traffic and road impacts by the North Kingstown Department of Public Works;
- Impacts on vegetation, fish, and wildlife, and whether the Facilities will present an unacceptable harm to the environment by the Rhode Island Department of Environmental Management;
- Land use consistency with the master plan, zoning, noise, and soil erosion by the Quonset Development Corporation;
- Compliance with the North Kingstown Noise Ordinance by the North Kingstown Planning Commission;
- Energy supply/need, cost, and reliability impacts by the Rhode Island Public Utilities Commission; and
- Public health impacts of electromagnetic fields and drinking water impacts by the Rhode Island Department of Health.

Given the intent of the Energy Facility Siting Act not to duplicate efforts, and the extensive list of experts that were otherwise being consulted, the Division chose to focus on factors that were not otherwise being considered by others.

Collaboration with, and direct assistance from, other Agencies

The DSP staff reviewed the Project’s consistency with, *Energy 2035: Rhode Island State Energy Plan*, in close collaboration with staff of the Office of Energy Resources (“OER”), as required by the EFSB’s Preliminary Decision and Order. DSP staff and OER staff met to coordinate the process and discuss each office’s findings. OER, as the experts on the topic of energy and the main authors and implementers of *Energy 2035*, led the analysis on determining whether the Project is consistent with the State’s Energy Plan. The DSP staff reviewed the draft consistency determination produced by OER and coordinated with it in finalizing the content. The final consistency determination found in Part Two of this Advisory Opinion reflects this close collaboration between OER and the DSP.

3. Information Requests and Responses

In executing the review process, DSP staff identified an issue that needed to be supplemented with information not included in the Application. As such, the DSP made an informational request to the Applicant. Specifically, the DSP requested information pertaining to tax revenues that may accrue to the State and Town of North Kingstown.

4. State Planning Council Review

The final draft advisory opinion, prepared by DSP staff, was submitted to the State Planning Council (“Council”) for initial review on August 16, 2021. However, in order to avoid the potential of *ex parte* communication, the draft opinion was not sent to a member who serves on the EFSB, namely, Meredith E. Brady. In following a procedure used for other types of project reviews, Council members were given ten days to enter any objections to the draft advisory opinion. Having received none, the draft advisory opinion was thereby accepted by the State Planning Council on August 21, 2021. Had any objection been received, the matter would have been docketed for discussion and action at the Council’s next meeting.

ORGANIZATION OF THE ADVISORY OPINION

Part Two of this Advisory Opinion presents State Guide Plan consistency assessments, including the State Energy Plan; Part Three presents the results of the socio-economic impact assessment of the construction and operation of the Revolution Wind Project; and Part Four concludes the Advisory Opinion with a summary of findings and recommendations.

PART TWO: STATE GUIDE PLAN CONSISTENCY

BACKGROUND

The State Guide Plan (SGP) was established by Rhode Island General Law 42-11-10(d), which states:

State guide plan. The state guide plan shall be comprised of functional elements or plans dealing with land use; physical development and environmental concerns; economic development; energy supply, access, use, and conservation; human services; and other factors necessary to accomplish the objective of this section. The state guide plan shall be a means for centralizing and integrating long-range goals, policies, and plans. State agencies concerned with specific subject areas, local governments, and the public shall participate in the state guide planning process, which shall be closely coordinated with the budgeting process.

The SGP is intended to provide a degree of continuity and permanent policy direction for the state's future development. It is not a single plan, but a collection of plans referred to as SGP elements that currently consists of eighteen functional elements. The State Planning Council is the entity authorized with adopting plans as elements of the State Guide Plan.

For purposes of determining "consistency and compliance with the State Guide Plan," the DSP examined the goals, objectives, and policies of the SGP elements since it is these components of the SGP that best present the state's intended future. Given the breadth of the State Guide Plan, it is inevitable that certain goals will compete with, or even come into conflict with, other goals. Furthermore, a determination of consistency is not a finding of fact; rather, it is a subjective judgement that exists on continuum from "not at all" to "completely." As such, a finding of "State Guide Plan consistency" cannot realistically be based on a project being completely consistent with each and every individual goal, objective, or policy found in the SGP. While each relevant State Guide Plan goal, objective, and policy is considered, the final recommendation regarding SGP consistency is based on assessing the Project's consistency with the *overall* intent of the SGP.

Several elements were found not to be applicable to the Project either because they are directed to a portion of the state outside of the Project area or because they do not contain any content relevant to the Project. As such, these elements were not further considered in this review.

These include:

1. Rhode Island Strategic Housing Plan
2. Solid Waste 2038: Rhode Island's Solid Waste Management Plan
3. Cultural Heritage and Land Management Plan for the Blackstone River Valley National Heritage Corridor

For those elements that were found to be germane, staff has provided an element by element assessment of the Project's consistency with the relevant goals, objectives, and policies of the element. These elements include:

1. Energy 2035: Rhode Island State Energy Plan
2. Land Use 2025: Rhode Island's State Land Use Policies & Plan
3. Rhode Island Rising: A Plan for People, Places, and Prosperity
4. State Housing Plan
5. Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan
6. A Greener Path: Greenspace & Greenways for Rhode Island's Future
7. Forest Resources Management Plan
8. Urban and Community Forestry Plan
9. State Historical Preservation Plan
10. Long-Range Transportation Plan
11. State Airport Systems Plan
12. Rhode Island Rail Plan
13. Waterborne Transportation Plan
14. Rhode Island Water 2030
15. Water Quality 2035

Please note that some the topics may be covered by another agency's advisory opinion. In those cases, the DSP and the State Planning Council decided, that it would be premature to make a *final* determination of consistency if expert opinions of those other agencies were not available. Therefore, findings of consistency for these elements should be considered *contingent*. These elements include:

- A Greener Path: Greenspace & Greenways for Rhode Island's Future
- State Historical Preservation Plan

What follows summarizes the purpose of each of the relevant State Guide Plan elements, identifies the goals, objectives, and/or policies particularly relevant to the Project, discusses how the Project relates to the element's goals, objectives, and policies.

A. Energy 2035: Rhode Island State Energy Plan (adopted October 8, 2015)

While all State Guide Plan elements have equal weight, *Energy 2035: Rhode Island State Energy Plan* (the "Plan") is the most directly relevant to the Project. As noted in the introduction, the

Energy Facility Siting Board requested the Statewide Planning Program, “in coordination with the Rhode Island Office of Energy Resources,” to render an advisory opinion, conducting “a particular examination of the Facility’s consistency and compliance with the State Energy Plan and whether the Facility will conform to the requirements of the Resilient Rhode Island Act...or any other applicable and/or relevant statute enacted” relating to the project.²” The following opinion was prepared primarily by the Office of Energy Resources, as the experts in this topic and main authors and implementers of the Plan.

We note that OER had addressed how Rhode Island’s 400 MW share of the Revolution Wind project was consistent with the State Energy Plan in Public Utilities Commission Docket #4929, and several of those points are cited in this report.³ Because the proposed Facility is required to interconnect the Revolution Wind generation project, and since the costs of the proposed Facility were imbedded within the underlying power purchase agreements approved in both Rhode Island and Connecticut, many of those conclusions hold. From an energy and environmental policy basis, the generation and transmission components are not distinguishable since both are required to enable potentially significant societal benefits, such as reductions in energy costs and greenhouse gas emissions, public health benefits, and economic development impacts.

Overview

Energy 2035 describes the existing energy system for the state, identifies Rhode Island's key energy issues, and sets goals and policies to improve energy security, cost-effectiveness, and sustainability in all sectors of energy production and consumption. It is intended to advance the effectiveness of public and private stewardship of the state’s use of energy resources and identifies activities needed to optimize the state’s energy systems.

Relevant goals, objectives, and policies

Evaluating the Project’s consistency and compliance with *Energy 2035* requires an understanding of the Plan’s intended scope and application within the context of energy policy decision-making. The research philosophy of the Plan is described in the following excerpt from *Energy 2035*’s “Introduction and Vision” section:

To reflect the uncertainties associated with forecasting for a dynamic energy system, the Project Team and Advisory Council deliberately chose a directional approach, rather than a specific approach, in establishing the Plan’s vision, goals, and strategies.

² Preliminary Order, page 15: http://www.ripuc.ri.gov/efsb/2021_SB-01/SB-2021-01%20Preliminary%20Order_149_sealed.pdf.pdf

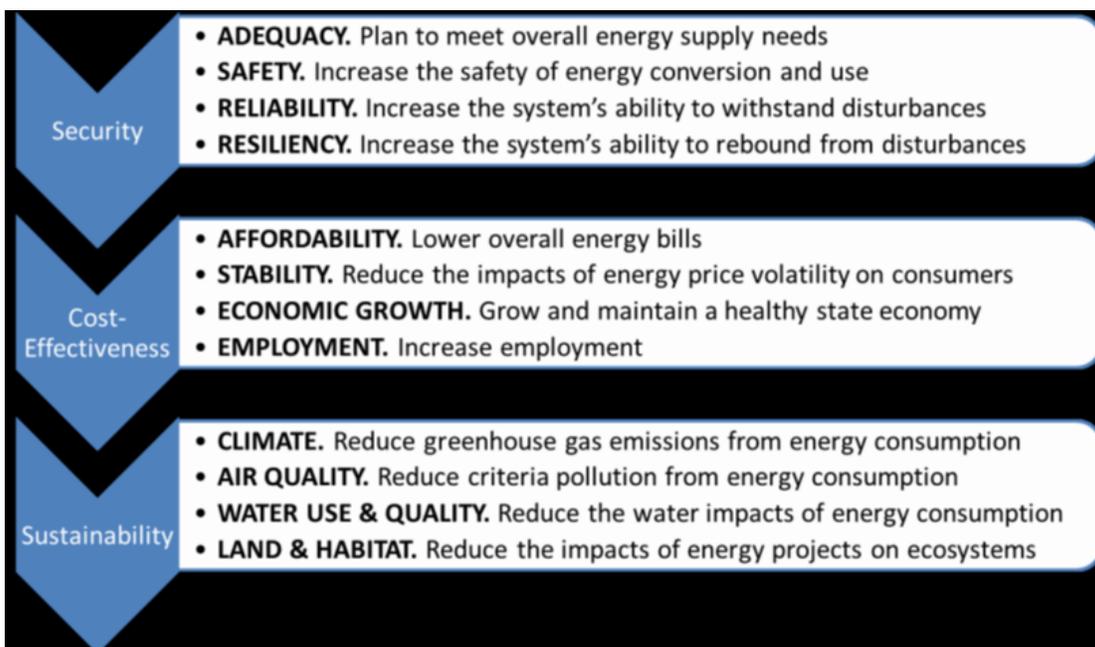
³ Public Utilities Commission Docket #4929:

<http://www.ripuc.ri.gov/eventsactions/docket/4929page.html>

RI OER Advisory Opinion filed in Docket #4929: http://www.ripuc.ri.gov/eventsactions/docket/4929-OER-AdvisoryOpinion_3-22-19.pdf

With the understanding that “all models are wrong, but some are useful,” the Team structured a data-driven scenario modeling analysis that would help policy-makers understand order-of-magnitude impacts and sensitivities—that is, the range of credible outcomes Rhode Island might expect from strategic investments in alternative demand and supply of energy resources. The team developed goals and performance measure targets that were quantitative enough for meaningful measurement, but not specific enough to risk immediate irrelevance. The team proposed a comprehensive set of policies and strategies to improve Rhode Island’s energy system and achieve performance measure targets set in the Plan, but shied away from prescriptive actions and discrete tactics, which will be addressed in the implementation of the plan, including development of policy and program design.” (pg. 7)

The purpose of *Energy 2035* is to provide a context for decision-making by setting a long-term vision and establishing high-level “goal posts”. *Energy 2035* groups its twelve goals under the three themes of security, cost-effectiveness, and sustainability as follows:



Energy 2035 also contains performance measure targets for each theme – 1. Increase fuel diversity in each sector above 2013 levels; 2. Produce economy-wide net benefits; and 3. Reduce greenhouse gas emissions by 45% below 1990 levels – while also recommending policies and strategies to assist in achieving the desired goals.

Results of the consistency review

First, *Energy 2035* presents a security goal measured by increasing fuel diversity above 2013

levels.⁴ The proposed Project will inherently advance this goal by enabling the interconnection of an incremental 704 MW of carbon-free generating capacity on the New England grid. Rhode Island's share of the project alone represents approximately 1.63 million MWh of clean energy – enough to offset roughly one-quarter of Rhode Island's annual net electric demand. Within the context of non-carbon electric resource potential assumed for 2035 by the Plan, this single project will fall within the “aggressive” bandwidth for offshore wind deployment in Rhode Island. By outpacing earlier offshore wind deployment goals by more than a decade this project will more quickly improve our state's energy security. The Project will enhance electric system resiliency by interconnecting a new, non-gas fired resource to the grid. With zero fuel costs, Revolution Wind will displace generation resources on the margin, such as natural gas or oil-fired assets during some winter hours. Also, its anticipated high-capacity factor during cold weather months is expected to lessen Rhode Island's exposure to winter fuel price and supply volatility. Furthermore, the project utilizes a fully domestic resource – offshore wind energy – which decreases our dependence on foreign energy imports and production constraints. For these reasons, Revolution Wind is a viable supply-side opportunity “to increase in-state fuel diversity and increase energy security by shifting away from dependence on fuels like natural gas,” consistent with *Energy 2035*. These benefits cannot be realized if the generation assets cannot be adequately connected to the grid. The proposed Project seeks to do just that.

Energy 2035 also focuses on a cost-effective energy future for Rhode Island. It sets a performance measure target to “produce economy-wide net benefits,” defined as “the product of an economic policy that prioritizes prudent, strategic energy system investments that generate long-term energy savings and more stable energy costs for consumers, businesses, and institutions in Rhode Island.” There are four underlying goals to the cost-effective theme: energy affordability, stability, economic growth, and increased employment.

Regarding energy affordability and price stability, OER is not aware of any incremental costs to local ratepayers stemming from the proposed Facility. Some costs of the proposed Facility are most likely embedded in power purchase agreements already approved by Rhode Island and Connecticut regulators. However, because the transmission and interconnection-related facilities are necessary to flow power from offshore generators to the grid, they are vital to enabling any potential energy cost savings. OER and the DSP did not conduct a separate energy market analysis to quantify the full range of impacts from the 704 MW Revolution Wind project. However, the PUC has a substantial public record on Rhode Island's share of these benefits in Docket 4929, in which the Commission unanimously approved a 20-year power purchase agreement between Revolution Wind (400 MW) and National Grid on behalf of Rhode Island consumers.

⁴ *Energy 2035*, p. 38. Fuel diversity is defined as “a risk management strategy that seeks to mitigate the potentially harmful effects of disproportionate reliance on certain fuels by expanding the portfolio of demand and supply sources used to provide energy services.”

Similarly, we refer the EFSB to the robust evidence and analysis in PUC Docket #4929 for the record of the projected economic development benefits and job growth associated with Revolution Wind which, absent the proposed Project, may not advance. Evidence presented in PUC Docket 4929 provides substantial detail on these matters, including the addition of hundreds of jobs for local workers and the infusion of in-state capital expenditures estimated at \$300 million.⁵ All evidence in that regulatory proceeding pointed toward significant net economy-wide benefits consistent with *Energy 2035*. Approval of the proposed Project will facilitate broader project development and construction activities in Rhode Island and neighboring Connecticut, spurring offshore wind industry investment and job creation across Southern New England.

The third pillar of the State Energy Plan is “sustainability,” with a performance measure target focused on the reduction of greenhouse gas emissions. This theme has four goals consisting of impacts on climate, air quality, water use and quality, and land and habitat. *Energy 2035* is clear that “Rhode Island must address supply-side Green House Gas (GHG) emissions, via displacement of fossil fuel generation by renewable energy generation.” Continuing, the Plan states, “This can be achieved either through the promotion of renewable energy development in state or out of state” and “through direct power procurement, purchasing of renewable energy credits, or both.”⁶

As already detailed, the interconnection and operation of Revolution Wind will reduce greenhouse gas emissions from the electric sector by enabling the offset of other carbon-emitting electricity generation. The interconnection itself also will not increase greenhouse gas emissions since it will serve only renewable offshore wind generators. In reducing greenhouse gas emissions in this manner, the Project may (incrementally) improve air quality by displacing costlier, carbon-intense electricity generating resources while in operation. However, as an offshore resource, the project’s interconnection may impact – to some degree – sensitive ocean and coastal ecosystems. On these matters, OER and DSP defer to the Rhode Island Department of Environmental Management and other agencies and stakeholders with specialized expertise and jurisdiction over our state’s coasts, water resources, and fisheries.

Finally, the proposed Project and its enablement of offshore wind generation is consistent with a key strategy supported by the Plan – the promotion of local and regional renewable energy resources. Rhode Island cannot achieve the *Energy 2035* Vision without bold steps to increase the generation and use of clean, renewable sources of energy – wind, solar, hydropower, anaerobic digestion, and others. Renewable energy will diversify the state’s energy supply portfolio, help mitigate long-term energy price volatility, stimulate the state’s economy through industry growth and job creation, and set Rhode Island on pace to meet its ambitious greenhouse

⁵ Navigant, 1. Schedule NG-6. PUC Docket 4929.

⁶ *Energy 2035*, 52.

gas emission reduction mandates. Furthermore, as electricity use grows in the thermal and transportation sectors, such as through the proliferation of high-efficiency heat pumps and electric vehicles – increasing amounts of renewable energy will assist in diversifying and decarbonizing these other sectors as well.

In summary:

1. The proposed Project will advance Energy 2035’s energy security themes by enabling the interconnection of a newly-developed, carbon-free generation resource at scale and increasing local resource adequacy and resilience through energy supply diversification;
2. The proposed Project will enable the entirety of the Revolution Wind project to advance toward construction and operation, supporting the realization of significant energy, economic, and environmental benefits to Rhode Island and the region; and,
3. The proposed Project will enable further electric sector decarbonization consistent with *Energy 2035*’s greenhouse gas emission reduction performance measure target.

Conclusion: After careful consideration the Office of Energy Resources and the Division of Statewide Planning finds 1) the proposed Project is consistent with the Plan’s goals and performance measure targets and 2) the proposed Project is consistent with the Plan’s policy themes and strategies. Therefore, the proposed Project is consistent with *Energy 2035*.

B. Land Use 2025: Rhode Island’s State Land Use Policies & Plan (adopted April 13, 2006)

Overview

Land Use 2025 brings together other content from several State Guide Plan elements such as natural resources, economic development, housing, and transportation to guide conservation and land development in the state. It articulates goals, objectives, and strategies to guide current and future land use planning using different development approaches for urban and rural areas. It is intended as a policy guide for directing growth to areas most capable of supporting current and future developed uses and to direct growth away from areas less suited for development. The core development pattern that *Land Use 2025* is directed at is the spread of relatively low-density housing and commercial highway development into the more rural areas of the state. The cornerstone of *Land Use 2025* is the principle that the state will “contain sprawl, and that housing, commerce, and social interaction will be concentrated in dense centers of varying scales, marked by quality design.”

Land Use 2025 contains a Future Land Use Map (FLUM) that visually depicts this intent. The map contains an Urban Services Boundary (USB) that shows a projection where areas with public services supporting higher development density presently exist or are generally desirable. Within the USB, most land is served by public water service; many areas also have public sewer

service. Also included on the FLUM are potential areas for the development of local growth centers. What was not specifically included in establishing the USB was the location of existing or proposed energy infrastructure. It is important to note the FLUM is a generalized portrayal of desired state land use policy and is not intended to be applied to specific development proposals.

Relevant goals, objectives, and policies

Goal LUG 1: A sustainable Rhode Island that is beautiful, diverse, connected, and compact with a distinct quality of place in our urban and rural centers.

Objective LUO 1A: Focus growth within the urban services boundary and in centers of different sizes and types; support traditional centers instead of new development.

Goal LUG 2: A statewide network of greenspaces and greenways that protects and preserves the environment, wildlife habitats, natural resources, scenic landscapes, provides recreation, and shapes urban growth.

Goal LUG 3: Excellence in community design: communities that are of high quality, energy efficient, safe and healthful, distinct, diverse and aesthetically pleasing; communities that are rich in natural, historical, cultural, and recreational resources; communities that provide abundant economic opportunities.

Objective LUO 3C: Maintain and protect the rural character of various parts of Rhode Island.

Goal LUG 4: First class supporting infrastructure that protects the public's health, safety, and welfare, fosters economic well-being, preserves and enhances environmental quality, and reinforces the distinction between urban and rural areas.

Objective LUO 4D: Locate new infrastructure in appropriate areas.

Policy LUP 4: Achieve a livable, coherent, and visually pleasing environment.

Policy LUP 5: Relate the use of land to its natural characteristics, varying suitability and capacity for development.

Policy LUP 13: Factor into decisions regarding development the importance of recreation, open space, historic resources, and public access to the shore to the State's economy, in tourism, and in maintaining our quality of life.

Policy LUP 18: Protect rare and unique geologic or other natural features.

Policy LUP 19: Preserve the best farmland and active farms in the State for active agricultural use.

Policy LUP 23: Preserve and enhance the distinctiveness of urban, suburban, village, and rural communities and landscapes.

Policy LUP 24: Preserve historic buildings, districts, and archeological sites.

Policy LUP 28: Protect and provide utility services that are adequate to meet the needs of present and future populations.

Results of the consistency review

The DSP considered the following findings in its evaluation of consistency:

The Project will be located within the Quonset Business Park which is within the urban services boundary.

The Project will connect into an already existing substation thereby utilizing existing infrastructure and utility rights-of-ways.

No existing land uses will be displaced or negatively impacted.

By locating within an established, developed business park, the Project would maintain the distinction between urban and rural centers.

The primary feature of the Project is the generation of renewable electricity and furthers the reduction of greenhouse gas emissions. As noted under *Rhode Island Rising* and in Part Three, section B, the Project will promote both direct and indirect economic growth as well as supplying electricity to local and regional businesses which helps to foster economic well-being. This same feature also applies to achieving “a vibrant sustainable economy” (*Land Use 2025 Goal 1*) and “provid[ing] abundant economic opportunities” (*Land Use 2025 Goal 3*).

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with *Land Use 2025: Rhode Island’s State Land Use Policies & Plan*.

C. Rhode Island Rising: A Plan for People, Places, and Prosperity (adopted December 2014)

Overview

Rhode Island Rising presents an analysis and discussion of economic development opportunities facing the state. It is intended to be a state-level economic development plan. On the topic of energy, *Rhode Island Rising* defers to *Energy 2035: Rhode Island State Energy Plan* for specific energy policy recommendations while emphasizing the need for Rhode Island to be resilient and competitive. The Plan recognizes that economic development requires a reliable energy infrastructure providing energy at competitive costs over the short-term as well as the potential for long-term economic benefits resulting from the development of sustainable, clean, and renewable energy systems.

Relevant goals, objectives, and policies

Goal 3: Support industries and investments that play to Rhode Island’s strengths.

Goal 5: Create a stronger, more resilient Rhode Island.

Policy 1: Support investments in sustainable built infrastructure to support economic activity, commerce, and benefits to communities.

Results of the consistency review

See Part Three, section B and the above section on *Energy 2035* for specifics pertaining to the Project's relationship to this element of the State Guide Plan.

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with *Rhode Island Rising*.

D. State Housing Plan (adopted March 2000)

Overview

The *State Housing Plan* establishes state goals and policies for housing. It serves as a guide to aid the public and private sectors in providing affordable housing, in standard condition, and in a suitable living environment, for all Rhode Island residents, with special emphasis on the housing needs of lower-income households and individuals.

Relevant goals, objectives, and policies

Goal 1-1-1B: Ensure the provision of a sufficient number of housing units to meet population needs.

Policy 1-2-3 B: Enhance and preserve historic and other aspects of neighborhoods and communities which add identity and character.

Results of the consistency review

The Project site is an industrial zone and not immediately proximate to residences; therefore, no existing housing would be directly affected by construction of the Onshore Facilities nor would opportunities for housing be impacted.

While there will be some visible impact to certain residential areas, the impact should not be significantly different than the view of the existing substation and facilities. Staff also considered potential noise impacts to residential areas but notes that the Facility must adhere to the Town noise ordinance.

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with the *State Housing Plan*.

E. State Historical Preservation Plan (adopted June 25, 1996)

Overview

Rhode Island's *State Historical Preservation Plan* describes the planning process for historic preservation, explains how the state organizes information about historic properties, sets goals, objectives, and policies for preservation, and identifies strategies for putting the plan into action.

Relevant goals, objectives, and policies

Goal 1: Protect and preserve all of Rhode Island's historic properties.

Goal 2: Retain community character through preservation of local heritage by the protection, restoration, and reuse of historic and cultural resources.

Objective 2C: Protect historic buildings, areas, and archeological sites from inappropriate alteration, neglect, and demolition.

Results of the consistency review

The Rhode Island Historical Preservation and Heritage Commission (RIHPHC) issued the following advisory opinion on August 20, 2021:

- The project is subject to RIHPHC jurisdiction and will be reviewed under the regulations of Section 106 of the National Historic Preservation Act.
- The Quonset Point Naval Air Station, in which part(s) of the project will be located, has been determined eligible for listing in the National Register of Historic Places. However, the portion of the project under EFSB jurisdiction does conform with relevant requirements regarding above-ground historic resources.

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with the *State Historical Preservation Plan*.

F. Ocean State Outdoors: Rhode Island's Comprehensive Outdoor Recreation Plan (adopted August 29, 2019)

Overview

Ocean State Outdoors presents long-term goals and a five-year plan of action for strategically managing outdoor recreational resources of the state, impending threats, and unfulfilled needs.

Relevant goals, objectives, and policies

Goal 2: Strengthen, expand, and promote the statewide recreation network while protecting natural and cultural resources as well as adapting to a changing environment.

Results of the consistency review

The closest recreational resource is Blue Beach located approximately ¼ mile to the southwest of the onshore project site. Other recreational resources within the general vicinity are Compass Rose Beach to the east and the North Kingstown Municipal Golf Course farther to the north across Roger Williams Way.

Since all proposed work occurs mainly within existing developed urban land uses and utility rights-of-way in the business park, the Project will have minimal to no impact on the recreational resources.

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with *Ocean State Outdoors*.

G. A Greener Path... Greenspace & Greenways For Rhode Island's Future (adopted November 10, 1994)

Overview

A Greener Path... Greenspace and Greenways for Rhode Island's Future offers a vision of an integrated, statewide greenway network, and provides strategies to advance protection of valuable resource lands, encourage transportation alternatives, and expand recreation opportunities for Rhode Island.

Relevant goals, objectives, and policies

Policy G-8: Direct new growth and development to areas and locations that minimize the potential for negative impacts upon the greenspace system.

Policy G-9: Incorporate a greenspace buffer within major new developments whenever the potential for discordance exists between the type, scale, or effects of the new facility and existing or planned adjacent land uses.

Policy E-1: Protect the physical and biological integrity of ecological systems and natural landscape units. Where possible, protect large, contiguous tracts of greenspace to meet the needs of certain wildlife species. Establish greenway corridors linking discrete parcels where such connections would not jeopardize management objectives for rare, endangered, or other species or communities of concern,

Policy P-1: Particularly within urban areas where it is lacking, make retention, enhancement, or reestablishment of greenspace a priority consideration in all physical development and revitalization projects. Make provision or expansion of public access to greenspace and greenways a fundamental aspect of community and economic revitalization efforts.

Results of the consistency review

The project will not disturb any existing or planned greenspace or greenway areas or interfere with the planned and promotion of the statewide network of greenspaces and greenways. As noted above, all proposed work occurs mainly within existing developed urban land uses and utility rights-of-way in the business park, therefore impacts to ecological systems and natural landscape units will be minimal. With respect to the impact on vegetative community, fish and wildlife that will be caused by disruption of the habitat and whether the Facilities will present an unacceptable harm to the environment, the DSP defers to the expertise of the Rhode Island Department of Environment Management.

Conclusion: Based on the available information, **the Division of Statewide Planning finds the proposed Project to be consistent with *A Greener Path... Greenspace and Greenways for Rhode Island's Future*. However, this conclusion is contingent on RIDEM's findings with respect to impacts on habitat and the environment.**

H. Forest Resources Management Plan (adopted March 10, 2005)

Overview

This Plan establishes a vision for the management of the forest resources of the state. It provides goals, policies, and strategies focused on the management of tree resources within the state. It is intended to advance local stewardship of the state's forest resources towards the twin goals of a healthy, sustainable economy and environment.

Relevant goals, objectives, and policies

Goal S: To create, conserve, and maintain sustainable forest resources.

Goal FRT: To provide statewide recreational activities and promote tourism in forested recreation areas.

Goal F: To conserve and restore Rhode Island's forests so as to minimize forest fragmentation.

Results of the consistency review

While the *Forest Resources Management Plan* does not define a minimum size for an area to be classified as "forest," the Farm, Forest, and Open Space Act defines "forest land" as "any tract or contiguous tracts of land, ten (10) acres or larger bearing a dense growth of trees..." The Applicant reports that approximately 6 acres of forested area will be cleared for the Onshore Substation Parcel and the Interconnection Facility Parcel.

Conclusion: **Due to the relatively small area of treed land that will be cleared for the Project, there is no inconsistency with the *Forest Resources Management Plan*. The Urban**

and Community Forest Plan, discussed below, is the more relevant SGP element for this proposed project.

I. Urban and Community Forestry Plan (adopted (May 13, 1999))

Overview

The Rhode Island *Urban and Community Forest Plan* establishes a vision, goal, and policies, and provides recommendations focused on the management of tree resources within the built environment. This guidance is intended to advance the effectiveness of local stewardship of the state's tree resources towards the twin goals of a healthy, sustainable economy and environment.

Relevant goals, objectives, and policies

Goal: Stabilize overall forest cover at or near the present level, and gradually repair the forest canopies of urbanized areas to the level recommended for proper ecological functioning.

Policy D1: Encourage new development that respects forest resources as vital elements of the community and properly integrates trees to create high-quality living and working environments.

Policy D2: Integrate trees into the built environment to beautify, buffer, and shelter structures and facilities.

Results of the consistency review

As noted above, the Applicant reports that approximately six acres of forested area will be cleared for the Onshore Substation Parcel and the Interconnection Facility Parcel. It is important to note that the *Urban and Community Forest Plan* is not site specific; its goal is to stabilize overall forest cover. The baseline for the overall forest cover is the 1995 land cover analyses which is applied to each municipality individually. The loss of forest cover for any individual project must be considered in the context of the overall amount of forested land in the Town of North Kingstown. The intent of the *Urban and Community Forest Plan* is not to prevent development of forested areas, but to provide a planning framework for preserving a certain percentage of forested areas within the context of development.

We also note that the provision of wind energy lessens the need for other forms of electrical generation, including solar, which can require much larger areas of deforestation than this project.

Conclusion: While recognizing the cumulative impact that many small development projects can have on a municipality's overall forest cover, it is the conclusion of the Division of Planning that with respect to this project, it is consistent with the *Urban and Community Forest Plan*.

J. Moving Forward RI 2040: Long-Range Transportation Plan (adopted December 2020)

Overview

This State Guide Plan element provides a long-range framework, goals, objectives, and recommendations for the movement of both goods and people. It encompasses the highway system, public transit, transportation system management, bicycle travel, pedestrian, intermodal, and regional transportation needs.

Relevant goals, objectives, and policies

This State Guide Plan element's goals and objectives are specifically tailored to address long-range transportation issues. As such, they generally won't apply to energy facility siting. Specific potential impacts upon traffic and road conditions associated with a facility during construction and operation is best assessed by the Rhode Island Department of Transportation or the host community. However, one objective could potentially be affected over the long-term and therefore is assessed below.

Objective: Reduce travel congestion.

Results of the consistency review

Based on Revolution Wind's application, "Construction-related traffic will add to the local traffic volume on public roads. The addition of this traffic is not expected to result in any additional congestion or change in level of service along any of the roadways within or surrounding the Project. Project operations are not expected to significantly increase local traffic volume on public roads, or otherwise affect traffic congestion or change the level of service along any of the local roadways." The key phrase in this assessment is "significantly". While additional traffic will occur, the existing roadways and interchanges have sufficient capacity to accommodate the additional traffic without disruption or congestion.

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with *Moving Forward RI 2040: Long-Range Transportation Plan*.

K. Waterborne Transportation Plan (adopted August 1998)

Overview

The purpose of this plan is to provide for the appropriate use of the State of Rhode Island's bays, harbors, and rivers for passenger transportation, and to develop a plan for waterborne passenger transportation in Rhode Island for the year 2010.

Relevant goals, objectives, and policies

This State Guide Plan element's goals and policies are specifically tailored to address waterborne passenger transportation issues. As such, they generally won't apply to energy facility siting. However, one goal specifically mentions the Project's general onshore location, and therefore is assessed below.

Goal 7: Encourage development of Quonset Point/Davisville as a future waterborne transportation site.

Results of the consistency review

Subsequent to the adoption of the *Waterborne Transportation Plan* in 1998, the Rhode Island Fast Ferry began operating a high-speed ferry service to Martha's Vineyard in 2003. The Project's location within the Quonset Business Park will not impact the ferry's operation. Additionally, the Applicant conducted a Navigation Safety Risk Assessment for the anticipated 12-month construction period which determined that "navigation safety will not be adversely impacted."

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with the *Waterborne Transportation Plan*.

L. Rhode Island Water 2030 (adopted June 14, 2012)

Overview

Overall, *Rhode Island Water 2030* describes the potable water resources of the state and sets goals and policies for the management of issues pertaining to them. It focuses on critical policy and emerging trends for potable water systems at all management and planning levels. It is intended to serve as the foundation for coordinated water supply management and decision making. It identifies where our drinking water comes from, the various types of drinking water systems in the state, and the organizational and managerial responsibilities of our water systems. It overviews the roles and responsibilities of State agencies relative to water allocation but does not address in detail the functions and values of the raw natural resource or the protection of its quality as this subject matter is addressed through other State Guide Plan Elements. It also does not offer policy considerations for the siting of specific types of water users.

Relevant goals, objectives, and policies

Goal WRM-1: Manage and plan for the sustainable water use and development of the water resources of the State.

Policy 1: Ensure the overall long-term availability of potable water statewide.

Policy 2: Manage water use and withdrawals based on water availability that considers hydrologic capacity, public health, and protection of aquatic resources.

Policy 4: Ensure the protection of public health, safety, and welfare as the priority use of potable water while striving to protect other uses and the economic well-being of the State.

Goal WRM-2: Protect and preserve the health and ecological functions of the water resources of the State.

Goal WRM-3: Ensure a reasonable supply of quality drinking water for the State.

Results of the consistency review

There are no waterbodies within the Project footprint and therefore there are no anticipated direct impacts to surface waters associated with the Onshore Facilities. The Project does not require the use of water in operation of the facilities.

There are no waterbodies within the Project footprint and therefore there are no anticipated direct impacts to surface waters associated with the Onshore Facilities.

The Project does not require the use of water in operation of the facilities.

Conclusion: The Division of Statewide Planning finds the proposed Project to be consistent with *Rhode Island Water 2030*.

M. Water Quality 2035 (adopted October 13, 2016)

Overview

This Plan describes existing practices, programs, and activities in major water quality areas and develops recommendations specific to each. It provides goals for water quality restoration and protection. The Plan addresses the protection and restoration of both surface and ground waters that are threatened or impaired by pollution. It sets forth recommendations for 24 sources of pollution that are known to contribute, or have the potential to contribute, to water quality problems in Rhode Island. It addresses reducing water pollution and protecting water resources through the proper management and planning for wastewater.

Relevant goals, objectives, and policies

Goal WQ #1: Protect the existing quality of Rhode Island's waters and aquatic habitats and prevent further degradation.

Goal WQ #2: Restore degraded waters and aquatic habitats to a condition that meets their water quality and habitat goals.

Results of the consistency review

It is important to note that *Water Quality 2035* does not address or endorse any specific types of wastewater management on a site by site basis. The proposed project site and use is not mentioned as a location or use of concern in this Plan. However, one of the Plan's overarching Pollution Source and Aquatic Habitat Management Policies is, "Ensuring compliance with federal, state, and local regulatory programs for water quality protection and restoration."

The Project must comply with an assortment of regulatory programs for water quality protection and restoration that include permits from the:

- Rhode Island Coastal Resources Management Council;
- Rhode Island Department of Environmental Management; and
- Army Corps of Engineers

Conclusion: Consistency with this Plan is dependent on the Applicant receiving all State and Federal permits pertaining to water quality. With proper permitting, the Project should be considered consistent with this State Guide Plan element.

N. Consistency with the Resilient Rhode Island Act and other relevant statutes

The EFSB also requested an opinion on whether the proposed Project would conform with the Resilient Rhode Island Act and other relevant statutes.

The Resilient Rhode Island Act, RIGL §42-6.2, established the Executive Climate Change Coordinating Council (EC4); set specific greenhouse gas emissions reduction targets; and incorporated consideration of climate change impacts into the powers and duties of all state agencies. The EC4 is charged with developing and tracking the implementation of a plan to achieve greenhouse gas emissions reductions below 1990 levels of: ten percent (10%) by 2020; forty-five percent (45%) by 2035; and eighty percent (80%) by 2050.

In April 2021, the Act on Climate was signed into law and established more stringent *mandatory* greenhouse gas emissions reduction targets of: ten percent (10%) below 1990 levels by 2020, forty-five percent (45%) below 1990 levels by 2030; eighty percent (80%) below 1990 levels by 2040; and net-zero emissions by 2050.

The proposed Project represents necessary transmission and interconnection-related facilities to deliver carbon-free power from wind generating assets located in federal waters into Rhode Island and the New England grid.

We note here that the Public Utilities Commission, in their review of the underlying power purchase agreement for Rhode Island's 400 MW share of Revolution Wind, found evidence "that each model and methodology used produced directionally consistent conclusions that the project will result in a reduction to regional greenhouse gas emissions."^{7 8} In that proceeding, "the PUC concluded that the PPA is consistent with the region's greenhouse gas reduction targets."

Furthermore, in its Advisory Opinion concerning Rhode Island's 400 MW share of Revolution Wind, OER found the following:

Revolution Wind's 400 MW of newly developed, carbon-free energy will significantly reduce electric sector emissions for the state and region. The project will require no fossil fuels or water to generate its estimated 1.63 million MWh annually and, in most hours of operation, will displace carbon-emitting resources connected to the New England power system. In turn, a reduction in the burning of fossil fuels will decrease particulate matter and harmful greenhouse gases in the atmosphere. Directionally, these outcomes are consistent with state policy goals addressing climate change, particularly the Resilient Rhode Island Act.

Based upon our review of available data sources, Revolution Wind is expected to reduce regional electric sector carbon emissions by at least eleven (11) million metric tons over the first twenty-two (22) years of its operation. This equates to average annual CO₂ reductions of nearly 502,000 metric tons over two decades.⁹

OER went on to find:

Revolution Wind's displacement of fossil fuel generation will also help reduce nitrogen oxide (NO_x) emissions. According to the United States National Library of Medicine, which is part of the National Institutes of Health, "(n)itrogen oxides are a group of seven gases and compounds composed of nitrogen and oxygen" that are emitted from the "burning of coal, oil, diesel fuel, and natural gas, especially from electric power plants," and other sources. As a greenhouse gas, NO_x emissions contribute to climate change and can have harmful effects on human health. Short-term health impacts of NO_x include "irritation of the respiratory system, eyes, and skin; aggravation of respiratory diseases, particularly asthma; coughing and choking; nausea; headache; abdominal pain; and general breathing difficulties." Long-term

⁷ PUC Docket 4929, Order 23609.

⁸ In Docket 4929, National Grid testified that, "The annual reduction in greenhouse gas reduction emissions is projected to be approximately 102,000 tons CO₂/yr, or a 10% reduction for the Rhode Island Electric Power Consumption sector." This estimated impact is from Rhode Island's 400 MW share of Revolution Wind alone; further GHG reductions can be expected from the full 704 MW project, once operational. See: Testimony of Timothy J. Brennan and Corinne M. DiDomenico, Page 32, Lines 5-8.

⁹ OER Advisory Opinion, page 26. PUC Docket #4929.

exposure to nitrogen dioxide can cause asthma and respiratory infections; health effects can be significantly worse at very high levels of exposure. Based upon TCR’s modeling, the operation of Revolution Wind will result in cumulative NOx reductions, on a societal basis, of nearly 1,400 metric tons through 2045.¹⁰

In 2020, Executive Order 20-01 established a first-in-the-nation goal to meet 100% of Rhode Island’s electricity demand with renewable energy by 2030. In response to the order, OER conducted an economic and energy market analysis, and developed policy and programmatic pathways, to meet this state-wide clean electricity goal. The effort resulted in OER’s report - *The Road to 100% Renewable Electricity by 2030 in Rhode Island* – which provides economic analysis of the key factors that will guide Rhode Island in the coming years as the state accelerates its adoption of carbon-free renewable resources.¹¹

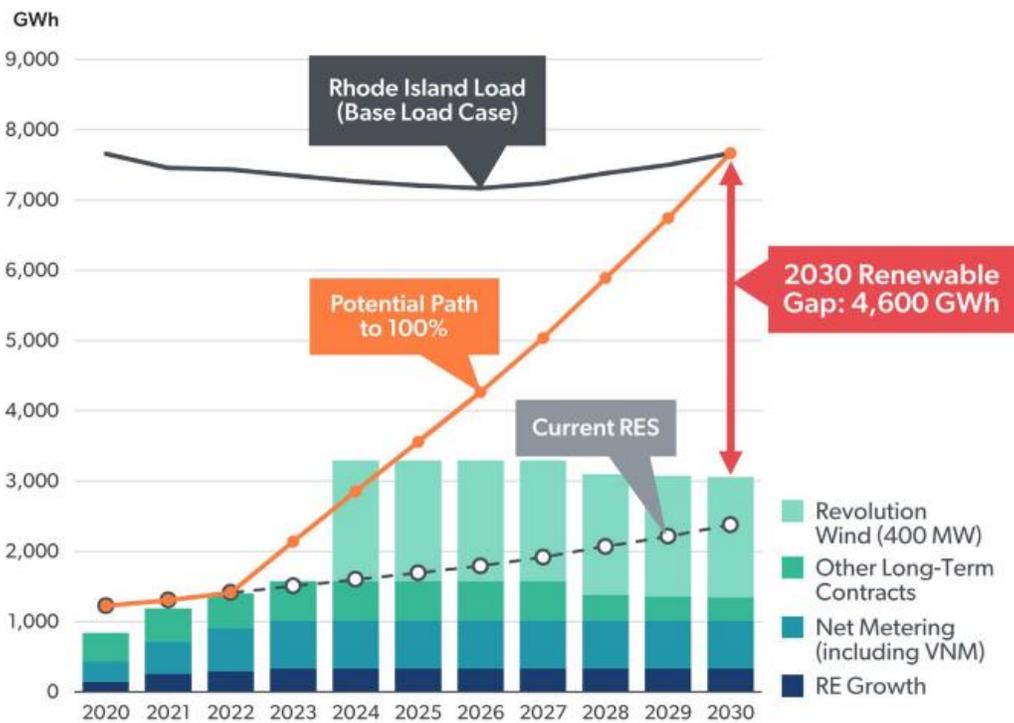


FIGURE 3: RENEWABLE ELECTRICITY GAP TO ACHIEVE 100% RENEWABLES

The analysis finds that even with the Revolution Wind project, an additional 4,600 GWh of renewable supply must be procured to achieve 100% clean electricity by 2030.¹² Although this level of increased renewable energy supply is technically and economically feasible, it becomes

¹⁰ OER Advisory Opinion, page 29. PUC Docket #4929.

¹¹ The Road to 100% Renewable Electricity: <http://www.energy.ri.gov/100percent/>

¹² The Road to 100% Renewable Electricity, page 13

less so if the Revolution Wind project fails to come online. Specifically, offshore wind projects such as Revolution Wind have acquisition costs that are competitive with onshore wind and solar, while also having relatively high generating capacity.¹³ By being cost competitive with other renewable technologies but generating more electricity per built capacity, offshore wind can help to drive down the cost of achieving the 100% renewable electricity goal. Moreover, the analysis showed that in-state offshore wind also has the potential to provide substantial, positive GDP impacts including increased local clean energy jobs.¹⁴

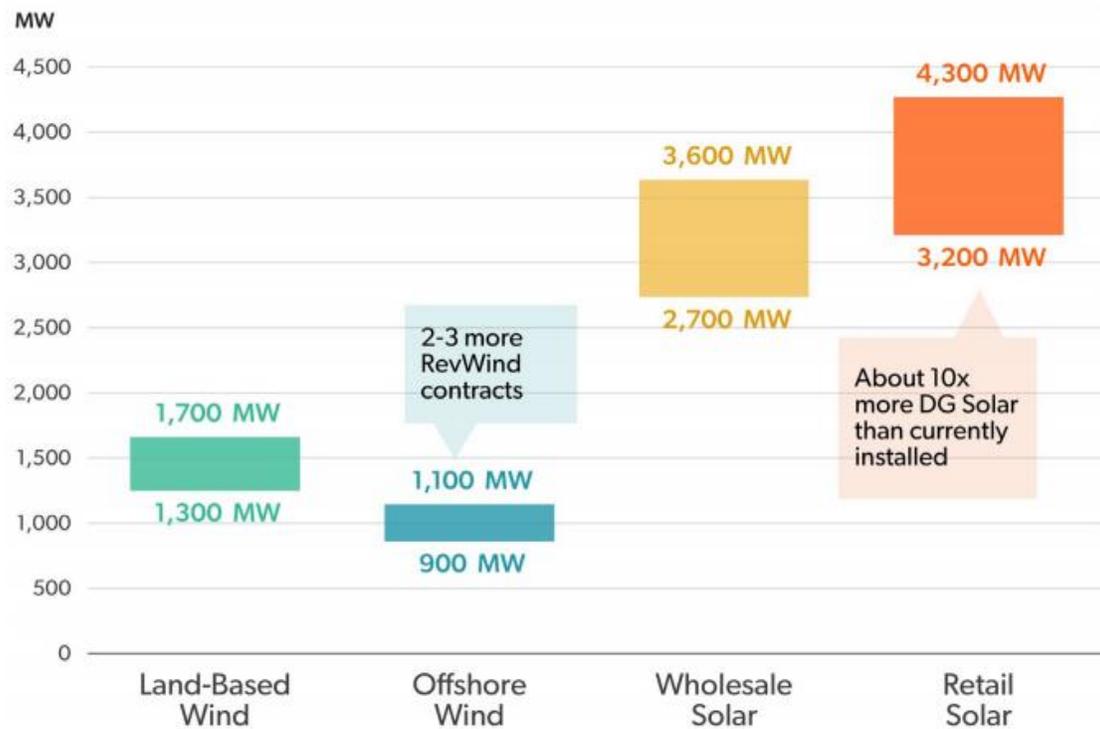


FIGURE 5: CAPACITY OF EACH TECHNOLOGY NEEDED TO FILL 2030 RENEWABLE ENERGY GAP

Conclusion: The proposed Project, through its enablement and delivery of carbon-free generation at significant scale, is consistent with Rhode Island’s executive order to achieve 100% renewable electricity by 2030, the Act on Climate, and the Resilient Rhode Island Act.

¹³ The Road to 100% Renewable Electricity, pages 18 and 24

¹⁴ The Road to 100% Renewable Electricity, page 48

PART THREE: SOCIO-ECONOMIC IMPACT ASSESSMENT

BACKGROUND

Neither the Energy Facility Siting Act nor the EFSB's order specifies the topics to be included in a socio-economic impact assessment other than that the analysis must include, "economic and reliability benefits, including employment and tax benefits to the Town of North Kingstown and/or the State." The application submitted by Revolution Wind does include the following topics:

- Population
- Employment and Economic Impacts
- Land Use
- Visual Resources
- Noise
- Transportation
- Cultural Resources
- Safety and Public Health
- Electric and Magnetic Fields

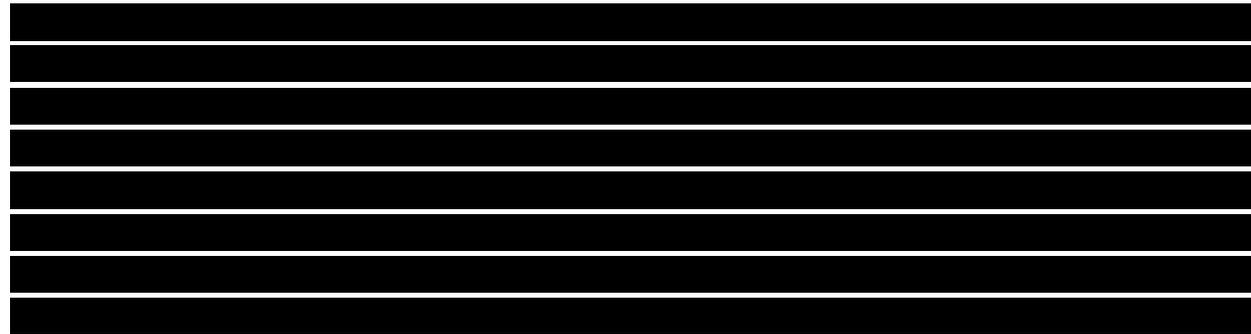
The DSP concurs that these topics are commonly accepted components of socio-economic impact assessments. As noted in Part One, in determining which socio-economic topics to address for this advisory opinion, the DSP recognized that the EFSB has already requested that many factors be evaluated by the state's leading experts within their respective fields. Given the expertise that these other agencies can provide to the EFSB, those topics are not examined as part of this report's analysis. Therefore, in the absence of additional direction, this advisory opinion will limit itself to impacts from the construction and operation of the Facility on:

- economic impact and employment;
- state and local tax revenues;
- energy reliability;
- the size and composition of the population;
- social equity;
- housing; and
- visual impacts

Many portions of this socio-economic analysis were conducted using quantitative and qualitative data supplied by the Applicant. With regards to economic data provided by the Applicant, the DSP utilized the Applicant's construction and operations cost data. Staff also reviewed pre-filed testimony from all parties and noted if there were differences of opinion on the accuracy of the data and/or projections reported in the Application.

A. ECONOMIC IMPACT ASSESSMENT

Analysis Approach



██████████ The Applicant provided a confidential economic analysis to the DSP on the condition that DSP sign a non-disclosure agreement (NDA).

In order to evaluate the Application regarding the projected economic benefits of the Project, the DSP enlisted the assistance of the Office of Revenue Analysis (ORA) in the Rhode Island Department of Revenue, which conducted additional research and economic modeling to ensure the validity of the conclusions reached by the Applicant's economic analysis.

ORA used the REMI Tax-PI model of Rhode Island's economy to analyze the economic impact of the proposed Revolution Wind project. The REMI Tax-PI model is a dynamic forecasting and policy analysis tool that can calculate economic and fiscal impacts over multiple years on a sequential basis. It is important to note that ORA did not have the same input set available as the Applicant had when its analysis was conducted; ORA relied primarily on the information provided in the Applicant's economic analysis.

In addition to ORA, the DSP reviewed the March 2019 pre-filed advisory opinions of the Office of Energy Resources (OER)¹⁵ and the RI Commerce Corporation (Commerce)¹⁶; both offices engaged outside economic consultants to review information provided in an economic analysis by the Applicant's consultant, Navigant Consulting, from October of 2018. Although the most current economic analysis was that provided by the Applicant to the DSP, the unanimous conclusion drawn by the OER, Commerce, and the DSP is that the economic effect of the Project on the state is positive.

Navigant utilized the Jobs and Economic Development Impact (JEDI) Offshore Wind Model developed by the National Renewable Energy Laboratory (NREL). The group of JEDI models,

¹⁵ "Rhode Island Office of Energy Resources Advisory Opinion, Docket No. 4929 Re: The Narragansett Electric Company d/b/a National Grid Review of Power Purchase Agreement Pursuant to R.I General Laws Section 39-31-1 To 9: " March 22, 2019.

¹⁶ "Rhode Island Commerce Corporation's Advisory Opinion to the Rhode Island Public Utilities Commission on the proposed Power Purchase Agreement (PPA) between the Narragansett Electric Company, d/b/a National Grid, and DWW Rev I, LLC, also known as the Revolution Wind offshore wind project developed by Ørsted U.S. Offshore Wind (Docket No. 4929):" March 22, 2019.

which also cover land-based resources, are commonly used to assess the economic benefits of renewable energy projects in the United States.

At the direction of OER and DPUC, Power Advisory, LLC independently reviewed the economic development impact analysis produced by Navigant Consulting. Power Advisory did not perform its own economic benefits assessment but has experience in the best practices for assessing economic impacts from prior consulting engagements

At the direction of Commerce, Appleseed independently reviewed the economic development impact analysis produced by Navigant Consulting. Appleseed is an economic consulting firm with experience conducting economic impact analyses and economic development studies, including offshore wind farm projects. At Commerce's request, Appleseed used the IMPLAN model to assess the statewide economic impact of the Project. The IMPLAN input-output modeling system is an industry standard modeling tool commonly used in economic impact studies that relies on regional economic base data and information collected by the analyst, Appleseed, as well as information on the Project provided by National Grid and Ørsted.

1. Local and Statewide Business Impacts: Jobs, Earnings, and Economic Output

Both the construction and operations phases of the Project involve a significant amount of investment in Rhode Island, which economic theory and modeling indicates will lead to a positive effect on businesses through increased spending and employment.

Direct jobs are defined as on-site labor and professional services. On-site labor is given in job-years. Job-years are defined as full-time equivalent (FTE) jobs multiplied by the number of construction years. Construction jobs are given as FTE job-years since they are spread over a multi-year construction period. Some construction jobs will last only a portion of a year while others may last the entire expected construction period of three years. Operations jobs are given as annual FTE jobs over the entire operating period.

Indirect jobs are driven by the increase in demand for goods and services from direct on-site project spending including business and companies like construction material and component suppliers, analysts, and attorneys involved with project feasibility assessments or contract negotiations, equipment, or replacement part manufacturers and others.

Induced jobs are driven by the local expenditures of those receiving payments within the first two job categories or increased household spending by workers.

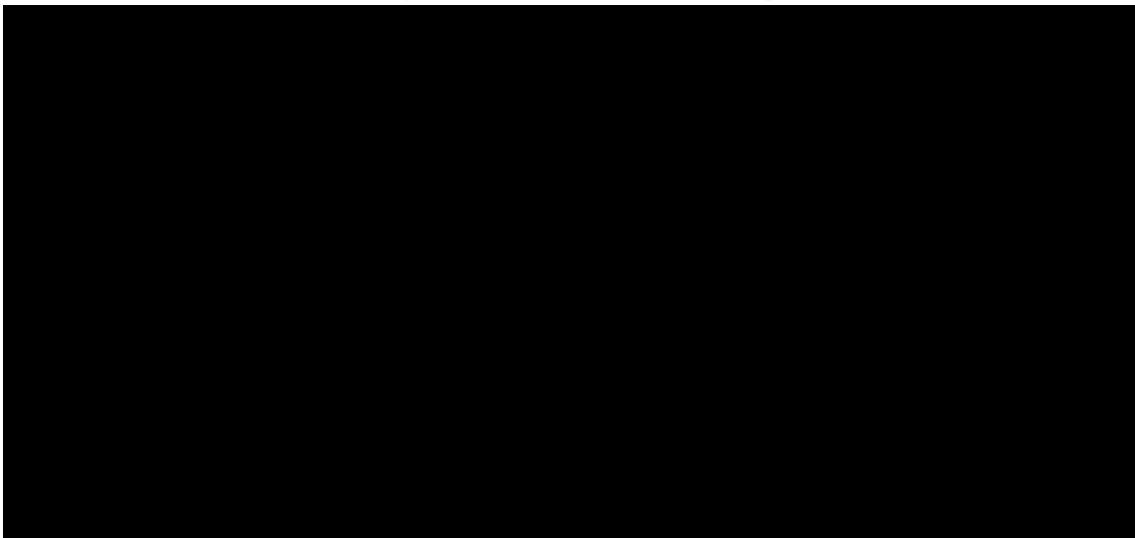
Labor Earnings encompass the additional earnings (wages and employer paid benefits) associated with the additional local jobs.

Gross Output is the sum value of all goods and services at all stages of production (i.e., as a raw material and as a finished product) resulting from the project.

Value Added is the best indicator of economic development benefits to the local economy. The sum total of value added of all enterprises and self-employed in a given state comprises that state's GDP. These values are the sum of earnings from capital and labor or the difference between total gross output and the cost of intermediate inputs. It is comprised of payments made to workers, proprietary income, other property type income, indirect business taxes, and taxes on production and imports less subsidies.

Direct and Indirect Impacts: Jobs, Earnings, and Output

Table 1: Summary of Jobs and Investment Impacts in Rhode Island



Construction Phase: Direct and Indirect Impacts [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED] According to U.S. Bureau of Labor Statistics (BLS), the average annual wage for an employee in Rhode Island who works in the construction sector is \$63,414 (2019 data).¹⁷ This BLS data indicates that direct earnings estimates for employees at the Facility are reasonable and consistent with a finding of positive economic impact.

¹⁷ BLS, <http://www.bls.gov/data/>

Operations Phase: Direct and Indirect Impacts

According to BLS, the average annual wage for an employee in Rhode Island who works in the utilities sector is \$111,665 (2019 data).¹⁸ This BLS data indicates that direct earnings estimates for employees at the Facility are reasonable and consistent with a finding of positive economic impact.

ORA’s Findings:

The construction jobs were spread over calendar years 2021 and 2022. ORA modeled 510 jobs in each construction year in the REMI model. The operations jobs were modeled over calendar years 2023 through 2042 with each year including a total of 58 jobs.

ORA used the compensation figures for the direct jobs in the construction and operations phases to adjust the REMI Tax-PI model’s “Construction” and “Professional, Scientific, and Technical Services” annual wages to be consistent with those in the Applicant’s economic analysis.

The following table presents the results of ORA’s analysis:

	Construction Impacts* (Two Years)	Operations Impacts** (Annual)
Total Employment	969	108
<i>Government</i>	33	9
<i>Private Non-Farm</i>	936	98
Direct	510	58
Indirect	153	17
Induced	274	23

* The construction impacts represent the total impacts over calendar years 2021 and 2022.

**The operations impacts represent an average annual impact.

In the REMI model, ORA entered 510 construction jobs in each year of the construction period, measuring the economic impact over time.

¹⁸ BLS, <http://www.bls.gov/data/>

ORA modeled the operations phase of the project using the “Professional, Scientific and Technical Services” sector of the economy, as that is the industry that includes engineers [REDACTED] ORA also could have used the “Electric Power Generation, Transmission and Distribution” sector and the results would be markedly different. ORA chose the “Professional, Scientific, and Technical Services” sector because of the current role that electric power generation via fossil fuels has in the “Electric Power Generation, Transmission and Distribution” sector. With better inputs, ORA could do a more thorough modeling job and better assess the economic impact of the Revolution Wind project.

OER’s Findings:

Regarding statewide economic development and job impacts, OER found that “it is clear that the construction of this project will result in significant investments in local infrastructure and supply chain capacity, while generating hundreds of jobs for Ocean State workers. In total, Revolution Wind is expected to support more than eight hundred (800) jobs during its three-year construction phase and fifty (50) permanent jobs upon operation.”

Commerce’s Findings:

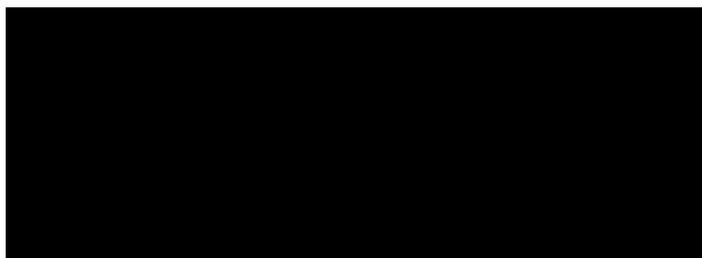
Appleseed analyzed the Project’s expected statewide economic impacts for the Commerce Corporation. This analysis estimated that the Project will have a positive economic impact on Rhode Island’s economy, generating 2,767 jobs. Once the Project becomes operational in late 2023, Appleseed estimated the Project will yield 86 full-time-equivalent jobs.

B. REVENUES

1. State Revenue

The Applicant states that state tax revenues will come from state income tax, state sales/use tax, and state payroll tax. The additional direct and indirect economic impacts of the potential project are stated above.

State Income Tax - Revolution Wind’s joint venture partners, Ørsted North America, Inc. and Eversource Investment, LLC, will pay income tax to the State of Rhode Island on their respective shares of project income throughout the life of the project. Based on the current state income tax rate of 7%, estimated amounts payable are:



The project will result in a positive amount of state income tax.

State Sales/Use tax - The Project has not yet estimated what its sales tax obligation might be.

State Payroll Tax – Revolution Wind has not estimated the payroll tax revenues that the Project will generate.

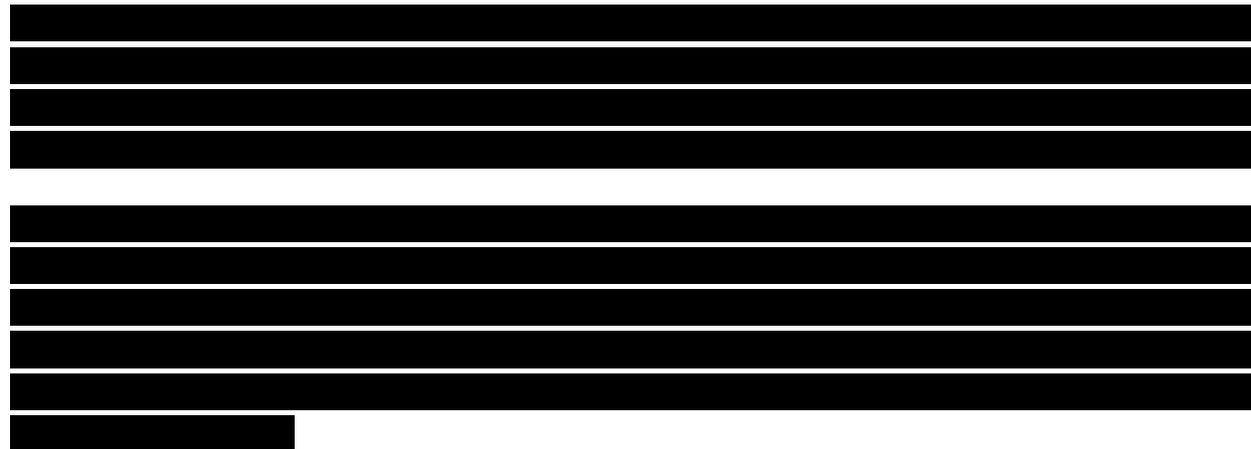
There are no anticipated costs to the State from the construction and operation of the facility.

ORA’s Findings:

The following table presents the results of ORA’s analysis:

	Construction Impacts (Two Years)	Operations Impacts (Annual)
Output (\$000)	\$327,849	\$26,468
Value Added (\$000)	\$183,349	\$16,848

- Output and value-added figures are presented in current dollars.



OER’s Findings:

Power Advisory found that in-state capital expenditures are estimated at \$305 million or 0.5 percent of the state’s gross domestic product (GDP).

Commerce’s Findings:

Appleseed estimated that there will be a one-time increase of \$282.2 million in the state’s GDP during a three-year construction period. Once the Project becomes operational in late 2023, Appleseed estimated that the Project will yield a \$8.12 million increase in the state’s annual GDP.

Conclusion: The Division of Statewide Planning finds that the construction and operation of the Facility will have a positive impact on revenue in the State.

2. Municipal Revenue

The local tax revenues that are estimated to accrue to the Town of North Kingstown from the Revolution Wind Project are for real property and tangible personal property taxes. The real property that will be utilized by Revolution Wind in connection with the project will consist of easement interests and leasehold interests. Revolution Wind will not own any fee title interests in the real property associated with the project. Certain of the real property used for the project includes real property that will be the subject of a ground lease with the fee title owner, Rhode Island Commerce Corporation, Acting By and Through Its Agent and Attorney-in-Fact, Quonset Development Corporation (“QDC”), and is presently subject to a PILOT Agreement between the Town and QDC dated as of July 6, 2010, and amended by a First Amendment to Pilot Agreement dated as of August 17, 2016 (collectively, the “PILOT Agreement”).

[REDACTED]

[REDACTED]

Personal Property/Tangible Property Taxes

[REDACTED]

Revolution Wind is engaged in discussions with the Town regarding the proposed terms for a community benefit agreement and replacement PILOT agreement that may address host community payments to the Town and payments in lieu of real estate and tangible or personal property taxes. That potential agreement may replace and supersede the information provided above. Definitive data or estimates of the tax revenue accruing to the Town from such arrangements are not yet available. Revolution Wind will provide an updated response once the necessary information is available.

Conclusion: The Division of Statewide Planning finds that construction and operation of the Facility will have a positive impact on the Town of North Kingstown's municipal revenue.

C. ENERGY RELIABILITY

The socio-economic benefits of a more reliable energy system accrue to both individuals and businesses. A more reliable energy system will lessen interruptions to the region's power supply. At a minimum, electrical power disturbances can result in inconveniences to customers but power supply interruptions can also harm vulnerable populations, cause economic loss to businesses, disrupt quality of life, and lead to more serious consequences such as fatalities. In the long-term, a system that is not reliable may lead to increased cost of service and an inability to respond to emergencies.

D. SOCIAL IMPACT ASSESSMENT

1. Population Change

Another aspect of socio-economic impact that was considered regarding the construction and operation of the Facility was the impact it will have on the local population. As a non-residential use, any population growth that would occur as a result of the construction and operation of the Facility would most likely be related to in-migration due to employment. The greatest number of jobs associated with the Project would be temporary jobs related to its construction. It is unlikely that a significant number of these temporary workers would establish permanent residency in North Kingstown as a result of their temporary employment. Economic analysis estimates project (see "Economic Impact" section, above) that the ongoing operations of the Facility will create an additional 50-86 direct permanent jobs. If all 50 - 86 workers and their families moved to North Kingstown, it would generate a maximum of approximately 218 new residents (based on an average household size of 2.53 persons)¹⁹ against a population projected to be approximately 29,000 in 2030.²⁰ It is not possible, however, to determine how many of these jobs could be filled by persons already living in North Kingstown or, for non-residents filling positions, how many would chose to relocate to North Kingstown. However, even if all permanent staff were to relocate to North Kingstown, the resulting percentage of population growth would be negligible.

The Project would not require any residential displacements. Given the nature and location of the Project, there is no reason to expect that it would lead to outmigration of existing residents.

¹⁹ <https://www.census.gov/data/tables/time-series/demo/families/households.html>

²⁰ Technical Paper 162: *Rhode Island Population Projections 2010-2040*. Rhode Island Statewide Planning Program, Division of Planning, Department of Administration, April 2013, 16.

2. Social Equity

In considering the potential impacts of the Project on the socio-economic fabric of the state, the DSP examined whether any Federally-protected group of people would bear a “disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.”²² Federal government statutes and regulations protect the following groups of people, which represent the groups considered in this analysis:

- minority populations;
- persons of low-income;
- children and the elderly;
- households with limited English proficiency; and
- individuals with a disability.

Table 2 presents data relative to the presence of the identified select population groups within the U.S. Census Tract in which the Facility would be located (Tract 501.03), Washington County, and the state of Rhode Island.

Table 2: Presence of Select Population Groups in Proximity to the Revolution Wind Project

	<u>Tract 501.03</u>	<u>Washington County</u>	<u>Rhode Island</u>
	% of total	% of total	% of total
Minority Population	21.8	9.1	28
Persons in Poverty	26.1	8.6	12.4
Population under age 5	3.9	3.7	5.2
School-aged Population (age 5 to 18)	19.2	15.2	14
Aging Individuals (age 65+)	18.7	23	17.7
Limited English Proficiency Households	n/a*	N/A**	4.9
Individuals with a Disability	n/a*	12.5	13.1

Source: US Census, 2019: ACS 1-Year Estimates & 5-Year Estimates

* Number could not be obtained.

**Number is too small to be statistically significant

For the purposes of this assessment, a significant concentration of any single population group is said to exist when the group makes up a greater percentage of the population in the defined area than in the host state as a whole. This methodology was chosen based on the development of the Transportation Equity Benefit Analysis contained in the State’s *FY 2022-2031 Transportation Improvement Program*.

²² *Learn About Environmental Justice*. Environmental Protection Agency, March 29, 2016. Web. 11 May 2016.

As shown in Table 2, In the category of populations over sixty-five years of age, the concentration of persons within Tract 501.03 is slightly lower than those in Washington County. Notably, Census Tract 501.03, has much higher percentages of minority persons and persons in poverty than are found within the Rhode Island and Washington County; however, a conversation with the North Kingstown Planning Director revealed that these populations live on the opposite (or west) side of Tract 501.03 from the location of the Facility, which is on the east side of the tract.

Overall, the population group data for Census Tract 501.03 indicates that vulnerable population groups do not exist in significant concentrations in proximity to where the Facility will be constructed.

Conclusion: The Division of Statewide Planning finds that the construction and operation of the Facility will not unfairly impact Federally protected populations.

3. Housing

The Facility is to be constructed at the Quonset Business Park. As such, the DSP expects that no existing housing units will be lost as a result of the construction or operation of the Project and, given that the DSP expects no significant change in North Kingstown's population as a result of the Project, it correspondingly does not expect any changes in housing supply or demand.

Conclusion: The Division of Statewide Planning finds that the construction and operation of the Facility will have no significant impacts to housing in North Kingstown.

4. Visual Impacts

Revolution Wind conducted a standard visual resource assessment for the Onshore Facilities, including identifying visually sensitive resources, prepared by Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.

Four important factors that the DSP considered were:

- The Onshore Facilities may be potentially visible from approximately 15% of the entire visual study area (VSA) and five of the 95 (5%) identified visually sensitive resources within the VSA.
- Field review suggested that the Onshore Facilities visibility would likely be significantly less than suggested by the viewshed analysis due to the presence of landscape vegetation present along roadways, which was not considered in the viewshed analysis.
- To the extent that the Onshore Facilities are visible, "At a maximum height of 80 feet, the proposed Onshore Facilities will not be out of scale or character with the existing types of

development currently present in the vicinity, such as the existing Davisville Substation, or the structures at nearby Quonset Business Park.

- The most significant, but limited, visual impact would be to some Camp Avenue residences as a result of the vegetative clearing associated with the Onshore Facility and associated driveways, access road, and transmission line ROWs.

Conclusion: The Division of Statewide Planning finds that the visual impacts caused by the construction and operation of the Onshore Facilities will be relatively limited, mostly impacting residents directly adjacent to the Onshore Facilities. These impacts would be generally localized and could be minimized through the use of mitigation, such as visual screening.

PART FOUR: ADVISORY OPINION AND RECOMMENDATIONS

The Advisory Opinion and Recommendations are that of the Statewide Planning Program (“Program”) i.e. the joint efforts of the Division of Statewide Planning and the State Planning Council. As noted in the Introduction, the Program was instructed to provide the Board with an advisory opinion on:

1. the socio-economic impact of the proposed Facility, including its construction and operation;
2. the Facility’s consistency and compliance with the State Guide Plan; and
3. in coordination with the Rhode Island Office of Energy Resources, a particular examination of the Facility's consistency and compliance with the State Energy Plan.

A. STATE GUIDE PLAN CONSISTENCY

The Program finds that the proposed Revolution Wind Project is consistent with the State Guide Plan including the State’s energy plan, *Energy 2035*, based on the findings:

- The Project is consistent with the State Guide Plan’s goals and performance measure targets; and,
- The Project is consistent with the State Guide Plan’s policy themes and strategies.

However, this finding of consistency is contingent upon Revolution Wind receiving all necessary State and Federal permits.

B. SOCIO-ECONOMIC IMPACTS

The Statewide Planning Program’s socio-economic impact assessment concludes that the Project will have an overall positive socio-economic impact, based on the individual findings identified below.

The Program finds that construction and operation of the Revolution Wind Project:

- will reduce regional wholesale capacity and energy prices and that the Project will lower electricity costs for Rhode Island consumers;
- will have a positive impact on the state’s businesses;
- will result in positive revenue benefits to the State;
- will have a positive impact on the Town of North Kingstown’s municipal revenue;
- is not likely to result in any significant population changes within the Town of North Kingstown;

- will not unfairly impact Federally protected populations;
- will have no significant impact to the number of housing units that exist within the Town of North Kingstown; and
- visual impacts caused by the construction and operation of the Project will be relatively limited.

C. ADVISORY OPINION RECOMMENDATION

As noted throughout, the Program limited its assessment to content matters that did not overlap or duplicate that requested of other entities and in several instances defers to the particular expertise solicited by the EFSB through the additional advisory opinions that it requested. As such the Program recommends that the EFSB in finalizing its perspective as to the socio-economic impact and State Guide Plan consistency of the project, view this opinion in light of the forthcoming information that was not otherwise available to the Program at the time of this report's production.